

## Evaluation of Atrazine, Princep, and Balance Applied Early Preplant in Roundup Ready Soybean.

02-2B-M30

**OBJECTIVE:** Evaluate soybean response to soil applied herbicides in weedfree conditions.

**SUMMARY:** None of the herbicides applied 30 days before planting caused soybean injury regardless of rate. Soybean grain yield ranged from 41 to 44 bu/A with no significant difference in yield due to herbicide or herbicide rate.

**HERBICIDES**

AATREX 90 WG  
BALANCE 75 WG  
PRINCEP 90 WG  
ROUNDUP ULTRA MAX 3.7 SL

**WEEDS**

crop tolerance only

**CROP**

soybean

Ronald Krausz and Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

## Evaluation of Atrazine, Princep, and Balance Applied Early Preplant in Roundup Ready Soybean.

Project Code: 02-2B-M30 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
 Trial Status: Final Updated: 10-24-02

**Objective:**

Evaluate soybean response to soil applied herbicides in weedfree conditions.

**Weed Code Common Name Scientific Name**  
 1. NA crop tolerance only

**Crop 1:** GLXMA soybean **Variety:** B-T 369CR  
**Planting Method:** Seeded **Planting Date:** 5-30-02  
**Rate:** 75 lb/A **Depth:** 1.0 IN  
**Row Spacing:** 30 IN

**Plot Width, Unit:** 10 FT **Plot Length, Unit:** 28 FT **Reps:** 3  
**Tillage Type:** No-Till **Study Design:** Randomized complete block  
**Previous Crop, Year:** ZEAMX, 2001

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 150 LB/A

**Soil Name:** Weir **% OM:** 1.5 **pH:** 6.4 **CEC:** 9  
**Texture:** Silt loam **Fert. Level:** P1: 87 LB/A, K: 259 LB/A

**APPLICATION DESCRIPTION**

	A	B	C
<b>Application Date:</b>	4-15-02	5-31-02	6-27-02
<b>Time of Day:</b>	8:00	11:00	8:00
<b>Application Method:</b>	Spray	Spray	Spray
<b>Application Timing:</b>	EPP30	PRE	V4
<b>Applic. Placement:</b>	BROFOL	BROFOL	BROFOL
<b>Air Temp., Unit:</b>	74 F	86 F	78 F
<b>% Relative Humidity:</b>	74	52	70
<b>Wind Velocity, Unit:</b>	5 MPH	0-5 MPH	0 MPH
<b>Soil Moisture:</b>	ABONOR	NORMAL	NORMAL

**CROP STAGE AT EACH APPLICATION**

	A	B	C
<b>Crop 1 Code, Stage:</b>	GLXMA NA	GLXMA NA	GLXMA V3
<b>Height, Unit:</b>	NA NA	NA NA	6-8 IN

**WEED STAGE AT EACH APPLICATION**

	A	B	C
<b>Weed 1 Code:</b>	NA		

**APPLICATION EQUIPMENT**

	A	B	C
<b>Appl. Equipment:</b>	CO2 sprayer	CO2 sprayer	CO2 sprayer
<b>Operating Pressure:</b>	40 PSI	40 PSI	40 PSI
<b>Nozzle Type:</b>	Flat fan	Flat fan	Flat fan
<b>Nozzle Size:</b>	8002	8002	8002
<b>Boom Length, Unit:</b>	7.5 FT	7.5 FT	7.5 FT
<b>Spray Volume, Unit:</b>	20 GPA	20 GPA	20 GPA

**NOTES:**

Harvested Sep-30-02, (2) 30 inch rows by 25 ft.

Evaluation of Atrazine, Princep, and Balance Applied Early Preplant  
in Roundup Ready Soybean.

Project Code: 02-2B-M30      Location: Belleville Research Center

Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	Yield	STARED	STARED	STARED	Necrosis	Necrosis	Necrosis
Rating Data Type	bu/A	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	9-30-02	6-13-02	6-27-02	7-25-02	6-13-02	6-27-02	7-25-02
Rating Date	14 DAP	28 DAP	56 DAP	14 DAP	28 DAP	56 DAP	
Trt-Eval Interval							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Yield	STARED	STARED	STARED	Necrosis	Necrosis	Necrosis
1	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	44	0	0	0	0	0	0
1	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
1	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
1	HANDWEED															
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	44	0	0	0	0	0	0
2	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	EPP30	A							
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
2	HANDWEED															
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	42	0	0	0	0	0	0
3	AATREX	90	WG	2.0	LB A/A	2.22	LB/A	EPP30	A							
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
3	HANDWEED															
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	41	0	0	0	0	0	0
4	PRINCEP	90	WG	1.0	LB A/A	1.11	LB/A	EPP30	A							
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
4	HANDWEED															
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	42	0	0	0	0	0	0
5	PRINCEP	90	WG	2.0	LB A/A	2.22	LB/A	EPP30	A							
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
5	HANDWEED															
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	EPP30	A	41	0	0	0	0	0	0
6	BALANCE	75	WG	0.094	LB A/A	2	OZ/A	EPP30	A							
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	PRE	B							
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	V4	C							
6	HANDWEED															
LSD (P=.05)										3.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										5.342	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.0264	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										2.426	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.1092	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Evaluation of Atrazine, Princep, and Balance Applied Early Preplant  
in Roundup Ready Soybean.  
Project Code: 02-2B-M30      Location: Belleville Research Center

Trial Comments

1. Protocol: RFK.
2. STARED = stand reduction. DAP = days after planting.